REMARKS

Applicant appreciates the time taken by the Examiner to review Applicant's present application. This application has been carefully reviewed in light of the Official Action mailed August 25, 2005. Claims 1, 6, 9, and 14 are amended herein. Claims 17-22 are newly added. Support for the amendments can be found in the specification as originally filed, particularly in paragraphs [0027], [0032], [0065], [0070], and [0073]. No new matter is introduced. Claims 8 and 16 are cancelled herein. By this Amendment, claims 1-7, 9-15, and 17-22 are pending. Applicant respectfully requests reconsideration and favorable action in this case.

Title Objections

The title was objected to as not descriptive. The title has been amended herein as suggested by the Examiner. Accordingly, withdrawal of this objection is respectfully requested.

Rejections under 35 U.S.C. § 103

Claims 1-16 were rejected as being unpatentable over Cabena, et al. *Intelligent Miner for Data Applications Guide* (hereinafter referred to as "Cabena"). Applicant respectfully traverses this rejection. Traversal to the rejection will be collectively discussed herein with respect to independent claims 1 and 9. Dependent claims 2-7, 10-15, and 17-22 are submitted to be patentable under *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Independent claims 1 and 9 are submitted to be patentable because they recite a novel combination wherein new and useful functionality is obtained over the applied prior art reference, Cabena. Applicant respectfully submits that, if claim elements are combined to obtain a new result, then the claimed method and/or system should be patentable and not rejected under 35 U.S.C. § 103, even if known elements or knowledge are embodied therein. *See* Seymour v. Osborne, 78 U.S. (11 Wall.) 516, 541 (1871) (U.S. historical adoption of the new result test); Sakraida v. Ag Pro, Inc., 425 U.S. 273, 281-82 (1976) (combination of known elements are patentable if they produce a "synergistic result" or a new or different function); Ryko Mfg. Co. v. Nu-Star Inc., 950 F.2d 714, 716 (Fed. Cir. 1991); Alcon Lab. Inc. v. Allergan Inc., 17 U.S.P.Q.2d 1365, 1373 (N.D. Tex. 1990) (even without "synergy" a combination of old elements may be patentable under 35 U.S.C. § 103); American Hoist & Derrick Co. v. Sowa &

elements may be patentable under 35 U.S.C. § 103); American Hoist & Derrick Co. v. Sowa & Sons, Inc., 725 F.2d 1350, 1360 (Fed. Cir. 1984) (claims of combination of old elements may be allowed even without a new result or function). See, also, MPEP 2106.

The Examiner pointed out that Cabena does not teach using polynomial regression to obtain (determine) model weights (parameters, coefficients, etc.) as claimed (Office Action, page 7). However, the Examiner contended that it "would have been obvious to one skilled in the art at the time of the invention that the predictive modeling system and method ... as taught by Cabena would have utilized any of a plurality of well known statistical/predictive modeling techniques to correlate (train) the developed predictive models including polynomial regression (multiple linear regression) to obtain weights for each of the variables in the model ... the resultant system being able to more accurately predict future customer behavior utilizing a correlated (trained) model." Applicant respectfully disagrees.

It would not have been obvious to one skilled in the art at the time of the invention that the predictive modeling system and method as taught by Cabena would have utilized polynomial regression to obtain weights for each of the variables in the model because one skilled in the art at the time the invention was made would have recognized that polynomial regression:

1) is difficult to implement or interpret (see, for example, the Pfaffenberger reference, p. 481, cited by the Examiner, hereinafter referred to as "Pfaffenberger");

2) has limited usefulness in behavior modeling (see, for example, H. Motulsky, *The GraphPad Guide to Nonlinear Regression*, April 1996, p. 4, hereinafter referred to as "Motulsky"); and

3) utilization of polynomial regression in the predictive modeling system and method as taught by Cabena would not necessarily provide a system that would have been "able to more accurately predict future customer behavior," as alleged by the Examiner (see, for example, Motulsky, p. 4.)

Accordingly, even if polynomial regression was known at the time of the invention, it would not have been obvious to one skilled in the art that utilization of polynomial regression in a system as taught by Cabena would have obtained a new and useful functionality.

Contrastingly, embodiments of the invention as recited in independent claims 1 and 9 provide an automated and scalable system for forecasting the future revenue and retention behavior for millions of customers in an automated way without the need for continual human intervention (see, e.g., Specification, paragraphs [0072]-[0074]). One advantage provided by embodiments of the instant invention is the ability to obtain more timely information (see, e.g., Specification, paragraphs [0073]-[0074]). More specifically, transactional data and customer timeseries information can be performed "in real time or in near real time," as recited in claim 17. Further, embodiments of the instant invention allow a user to identify and target at-risk customers such that appropriate action(s) can be taken sooner (*id.*).

In summary, embodiments of the invention as recited in independent claims 1 and 9 utilize polynomial regression in training a behavior model and obtaining a new and useful functionality, which is not taught by Cabena and would not have been obvious to one skilled in the art at the time of the invention at least because polynomial regression was not known to be accurate or useful in behavior modeling, as submitted above and supported at least by Pfaffenberger and Motulsky. Accordingly, Applicant respectfully submits that independents claims 1 and 9 are patentable over Cabena under 35 U.S.C. 103 and therefore should be allowed.

Conclusion

Applicant has now made an earnest attempt to place this application in condition for allowance. Other than as explicitly set forth above, this reply does not include an acquiescence to statements, assertions, assumptions, conclusions, or any combination thereof in the Office Action. For the foregoing reasons and for other reasons clearly apparent, Applicant respectfully requests full allowance of Claims 1-7, 9-15, and 17-22. The Examiner is invited to telephone the undersigned at the number listed below for prompt action in the event any issues remain.

An extension of one (1) month is requested and a Notification of Extension of Time Under 37 C.F.R. § 1.136 with the appropriate fee is enclosed herewith.

The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-3183 of Sprinkle IP Law Group.

Respectfully submitted,

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